

We claim:

1. A method of affecting chronic pain in a patient comprising:
  - a) implanting a stimulator in a target site of the brain; and
  - b) providing a stimulation signal to the stimulator to stimulate the target site to
- 5 affect chronic pain, the target site selected from the group consisting of the pre-frontal cortex, orbitofrontal cortex, anterior limb of the internal capsule, insular cortex, primary somatosensory cortex, secondary somatosensory cortex, cingulate cortex, anterior cingulate cortex, and posterior cingulate cortex, inferior frontal gyrus, middle frontal gyrus, superior frontal gyrus, medial frontal gyrus, parahippocampal gyrus, precuneus,
- 10 amygdala, and hippocampus.
2. The method of claim 1, wherein the target site is the pre-frontal cortex.
3. The method of claim 1, wherein the target site is the orbitofrontal cortex.
- 15 4. The method of claim 1, wherein the target site is the anterior limb of the internal capsule.
5. The method of claim 1, wherein the target site is the insular cortex.
- 20 6. The method of claim 1, wherein the target site is the primary somatosensory cortex.
7. The method of claim 1, wherein the target site is the secondary somatosensory
- 25 cortex.
8. The method of claim 1, wherein the target site is the cingulate cortex.
9. The method of claim 1, wherein the target site is the anterior cingulate cortex.
- 30 10. The method of claim 1, wherein the target site is the posterior cingulate cortex.
11. The method of claim 1, wherein the target site is the inferior frontal gyrus.

12. The method of claim 1, wherein the target site is the middle frontal gyrus.
13. The method of claim 1, wherein the target site is the superior frontal gyrus.
- 5 14. The method of claim 1, wherein the target site is the medial frontal gyrus.
15. The method of claim 1, wherein the target site is the parahippocampal gyrus.
- 10 16. The method of claim 1, wherein the target site is the precuneus.
17. The method of claim 1, wherein the target site is the amygdala.
18. The method of claim 1, wherein the target site is the hippocampus.
- 15 19. A method of affecting chronic pain in a patient comprising:
- a) implanting a stimulator in a target site of the brain; and
  - b) providing a stimulation signal to the stimulator to stimulate the target site,
- 20 the target site selected from the group consisting of the anterior nucleus of the thalamus, intralaminar thalamic nuclei, dorsomedial nucleus of the thalamus, mammillary body, lateral hypothalamus, locus coeruleus, dorsal raphe nucleus, substantia nigra pars compacta, substantia nigral pars reticulata, superior colliculus, tegmentum, ventral tegmentum, tectum, medial thalamus, nucleus accumbens, ventral striatum, and ventral pallidum.
- 25 20. The method of claim 19, wherein the target site is the anterior nucleus of the thalamus.
21. The method of claim 19, wherein the target site is the intralaminar thalamic nuclei.
- 30 22. The method of claim 19, wherein the target site is the dorsomedial nucleus of the thalamus.

23. The method of claim 19, wherein the target site is the mammillary body.
24. The method of claim 19, wherein the target site is the lateral hypothalamus.
- 5 25. The method of claim 19, wherein the target site is the locus coeruleus.
26. The method of claim 19, wherein the target site is the dorsal raphe nucleus.
27. The method of claim 19, wherein the target site is the substantia nigra pars  
10 compacta.
28. The method of claim 19, wherein the target site is the substantia nigra pars  
reticulata
- 15 29. The method of claim 19, wherein the target site is the superior colliculus.
30. The method of claim 19, wherein the target site is the tegmentum.
31. The method of claim 19, wherein the target site is the ventral tegmentum.  
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32. The method of claim 19, wherein the target site is the tectum.
33. The method of claim 19, wherein the target site is the ventral thalamus.
- 25 34. The method of claim 19, wherein the target site is the nucleus accumbens.
35. The method of claim 19, wherein the target site is the ventral striatum.
36. The method of claim 19, wherein the target site is the ventral pallidum  
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37. A method of affecting chronic pain comprising:  
a) implanting a stimulator in communication with a pain circuitry target site;  
and

b) providing a stimulation signal to the stimulator to stimulate the synthesis or release of an endogenous opioid to affect chronic pain.

38. A method of affecting chronic pain comprising:

- a) implanting a stimulator in communication with a pain circuitry target site;
- b) detecting a bodily activity of the body associated with the chronic pain;
- c) providing a stimulation signal to the stimulator in response to the detected bodily activity; and
- d) stimulating the target site to affect the hypothalamic-related condition

39. Use of a stimulator adapted to be implanted in a target site and provided with a stimulation signal to stimulate the target site to affect chronic pain, wherein the target site is selected from the group consisting of pre-frontal cortex, orbitofrontal cortex, anterior limb of the internal capsule, insular cortex, primary somatosensory cortex, secondary somatosensory cortex, cingulate cortex, anterior cingulate cortex, and posterior cingulate cortex, inferior frontal gyrus, middle frontal gyrus, superior frontal gyrus, medial frontal gyrus, parahippocampal gyrus, precuneus, amygdala, hippocampus, nucleus accumbens, ventral striatum, ventral pallidum, anterior nucleus of the thalamus, intralaminar thalamic nuclei, dorsomedial nucleus of the thalamus, mammillary body, lateral hypothalamus, locus coeruleus, dorsal raphe nucleus, substantia nigra pars compacta, substantia nigral pars reticulata, superior colliculus, tegmentum, ventral tegmentum, tectum, and medial thalamus.